

It may be pointed out that on the 24th of October a violent southwesterly storm, accompanied by thunder squalls, raged for 48 hours. It marked the onset of a cyclone which arrived over French territory, moving about south-southeast. The apparatus at the Observatory of Guette registered, from midnight of the 25th to 6 p. m. of the 26th \* \* \* the passage of 710 kilometers of wind, with velocities up to 20 meters per second, or 75 kilometers per hour. After three days of lull, a new storm \* \* \* with violent south wind, brought, on the 30th of October, the curious colored rains noted in our territory. \* \* \*

The water in this rain, when evaporated, left a deposit of 5.75 milligrams per liter, or for each 10 millimeters of rainfall 57.5 milligrams per square meter, or 575 grams per square hectare [2.471 acres]. When one considers that the Department of the Yonne has an area of 746,006 hectares [3,036.5 square miles], that means over 525 tons of solid matter left by the rain over this region alone.—B. M. V.

### LIGHTNING OUT OF A CLEAR SKY

[Extracts from a communication by H. J. Upham, Panama City, Fla.]

Referring to MONTHLY WEATHER REVIEW, August, 1926, p. 344, note on "Lightning out of a clear sky," B. M. V. quotes Florida conditions. I have noticed this dangerous lightning ahead of a summer squall so frequently during my three years' residence here, about 5 miles east of Panama City [some 45 miles northwest of Appalachicola—Ed.] that I am more apprehensive of it than of lightning in the squall, as one is more apt to linger out of doors. We have a summer condition of squalls forming northeast, east, and southeast of us. \* \* \*. Day after day the squalls will build up east of us with a general northerly movement, but some movement or building up westerly, toward us. There will be no squall condition west of us noticeable. These squalls miss us day after day at times, but come close enough for us to get the ground out of a comparatively clear sky. I have noticed this so frequently that I watch the squalls for this phase, when working in the grove. I have recognized it but not closely enough to study the position of the lightning in the cloud or how far ahead the ground occurs. I rather feel it occurs in the building up phase and when there is a slight haze and possibly detached clouds in the sky. It is a ground, though, and not from cloud to cloud. I have not noticed any connection between it and whether we will get the squall or not.

### PHYSIOLOGICAL EFFECTS OF CLIMATE

The climatologist, the physician, the geographer, all interested in the relations of climate to man, will find a useful presentation of present-day results and views regarding "The Physiological Effects of Climate" in a paper under that title by Otto Kestner, received at the Weather Bureau library as a separate from the *Handbuch der Normalen und Pathologischen Physiologie* (press of Julius Springer, Berlin).

The paper is a condensed summary (50 pages) of a considerable range of literature on the subject—the extensive citations referring mostly, however, to German authors. The variety of climatic factors dealt with in their relations to health is evident from the following list of major divisions of the work:

Temperature, moisture, wind direction and velocity, winds of the foehn type, barometric pressure, varying partial oxygen pressure and carbon dioxide pressure, light, ultra-violet radiation, consideration of ionization of the atmosphere, and of other factors not yet investigated.—B. M. V.

### TORNADOES OF NOVEMBER 25-26, 1926

Accompanying a cyclone of considerable intensity which moved northeastward from the Middle Plains to the Great Lakes on Thursday, November 25, a series of tornadoes occurred over Missouri, Arkansas, Louisiana, Mississippi, Tennessee, and Alabama, in which 88 lives are known to have been lost and 200 or more persons injured, aside from property damage which runs into many thousands of dollars.

Two of this series of tornadoes occurred in southern Missouri. The first struck near Competition, Laclede County, about 5 p. m., and, moving northeastward into Phelps County, took a toll of two lives and injured 11 persons. Its path ranged from 100 yards to half a mile in width and was about 50 miles in length. Considerable damage to buildings of all kinds and crops resulted, and much livestock was killed or injured.

A little over an hour later, or about 6.20 p. m., the second tornado occurred. Beginning at Brandsville, Howell County, near the Missouri-Arkansas line, it moved northeastward into Oregon County over a path about the same width as that of the preceding storm and was last seen near Thomasville about 14 miles away. The property damage from this tornado was considerably greater than the earlier one; four lives were lost and about 40 persons injured.

Arkansas paid the heaviest penalty in lives lost as well as in destruction of property. Here tornadoes occurred at a number of widely separated points. The chief one traversed Faulkner and Cleburne Counties, doing a great amount of property damage in and about Heber Springs, where it took a total of 22 lives and injured many persons.

A storm of like character struck Perry County about 6.30 p. m. and advanced into Conway County, and one also occurred in Pope and Van Buren Counties. These, however, were less severe, the first taking five lives and the second eight. Heavy property losses resulted from both storms. Storms of a more local character occurred near Newport with 2 lives lost, and at Sheridan with 1, Macedonia 2, and Moscow 10. In all, the tornadoes in Arkansas cost 50 lives, and a great amount of property damage, which has not yet been fully estimated.

About 8.45 p. m. a tornado of great intensity struck in the vicinity of Haynesville, Claiborne Parish, La. Its path averaged 67 yards wide and although it only covered 14 miles, damage of more than \$100,000 is reported with a loss of seven lives.

About 11.30 p. m. and 80 miles east of the Haynesville tornado the second Louisiana tornado occurred in Morehouse Parish near the vicinity of Mer Rouge. The path was about 100 yards wide and ran northeast about 4 miles. Here 11 persons were killed, 38 injured, and property loss was considerable.

Northeast of the Louisiana storms, a violent wind having tornadic characteristics occurred near Marks, Miss., where 10 persons were killed, a number injured, and many unsubstantial buildings damaged.

The high winds on the night of the 25th-26th in west Tennessee took the form of a tornado at Florence early on the morning of the 26th. Here little damage was done; the path was short and about 200 yards wide.

At 5.30 a. m. of the 26th the last of this series of violent storms occurred about 1 mile north of Winfield, Ala., doing considerable property damage and causing the loss of four lives. Here the path was 150 yards wide and 7 miles long.

Tornadoes in November are more or less infrequent, and the above appear to have been among the worst that have occurred during that month.—Grace W. Carter.